

On page 48, line 14, delete "oleocetylhydroxyethylammonium" and replace with

a1 --oleocetyltrimethylhydroxyethylammonium--.

On page 49, line 9, in formula (VII), change " $_2 X^-$ " to  $--2 X^-$ .

IN THE CLAIMS:

Please cancel claims 1 and 9-31 without prejudice or disclaimer, amend claims 2-8, and add new claims 32-77 as follows:

In claim 2, lines 1-2, delete "Composition according to claim 1, characterized in that" and replace with ~~A composition according to claim 32, wherein~~.

a2 on page 80, line 2, after "(I51)," delete "and";

on page 80, line 4, after "(I53)," insert --and--;

on page 80, line 6, delete ";" and insert a period after "(I54)".

a3 3. (Amended) A composition [Composition] according to Claim 2, [characterized in that] wherein the cationic direct dyes are chosen from the compounds having [correspond to the] structures (I1), (I2), (I14), and (I31).

a4 In claim 4, lines 1-2, delete "Composition according to claim 1, characterized in that" and replace with ~~A composition according to claim 32, wherein~~.

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In claim 5, lines 1-2, delete "Composition according to claim 1, characterized in that" and replace with ~~A composition according to claim 32, wherein~~.

a5

6. (Amended) A composition [Composition] according to Claim 5, [characterized in that] wherein the cationic direct dyes of formula (III) are chosen from the compounds [corresponding to the] having structures (III4), (III5) and (III13).

a6

In claim 7, lines 1-2, delete "Composition according to claim 1, characterized in that" and replace with ~~A composition according to claim 32, wherein~~.

a7

In claim 8, lines 1-2, delete "Composition according to claim 1, characterized in that" and replace with ~~A composition according to claim 32, wherein~~.

a8

on page 104, line 1, after "(IV)<sub>76</sub>", insert --; and--.

on page 104, line 2, insert a period after "(IV)<sub>77</sub>".

Please add new claims 32 to 77 as follows:

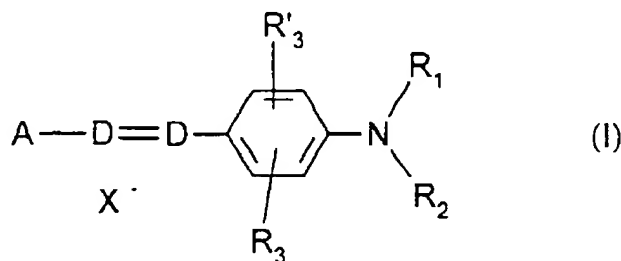
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--32. A composition for dyeing keratinous fibers comprising, in a medium suitable for dyeing,

(i) at least one cationic direct dye chosen from:

a) cationic direct dyes of formula (I):

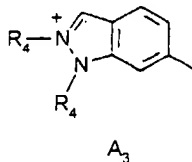
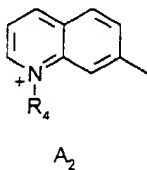


in which:

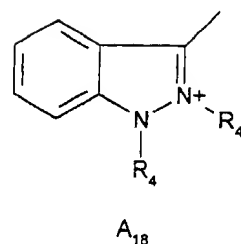
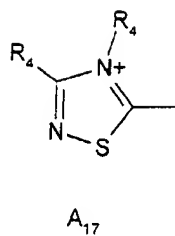
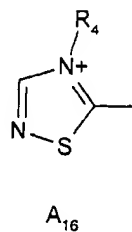
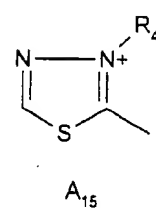
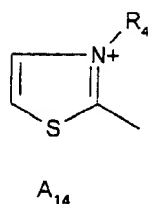
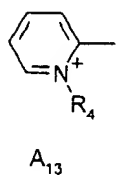
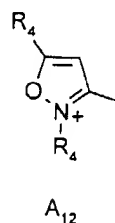
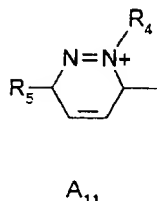
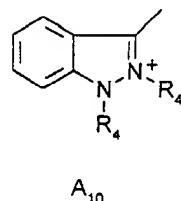
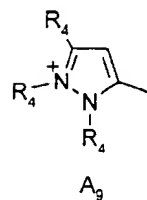
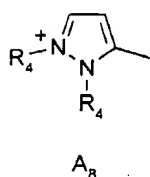
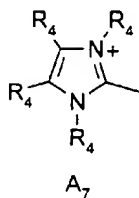
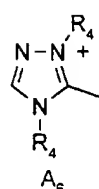
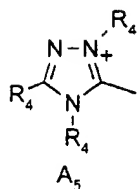
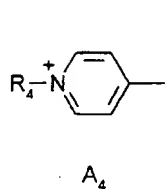
D is a nitrogen atom or a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which are identical or different, are chosen from a hydrogen atom; a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a -CN, -OH or -NH<sub>2</sub> radical or form with each other or a carbon atom of the benzene ring a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with at least one C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a 4'-aminophenyl radical,

$X^-$  is an anion,

C1=CN(R4)C(R4)=C1  
A<sub>1</sub>

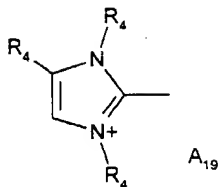
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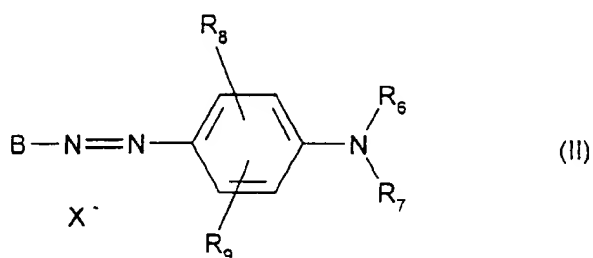
and



in which R<sub>4</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a hydroxyl radical and R<sub>5</sub> is a C<sub>1</sub>-C<sub>4</sub> alkoxy radical,

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

**b) cationic direct dyes of formula (II):**



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in which:

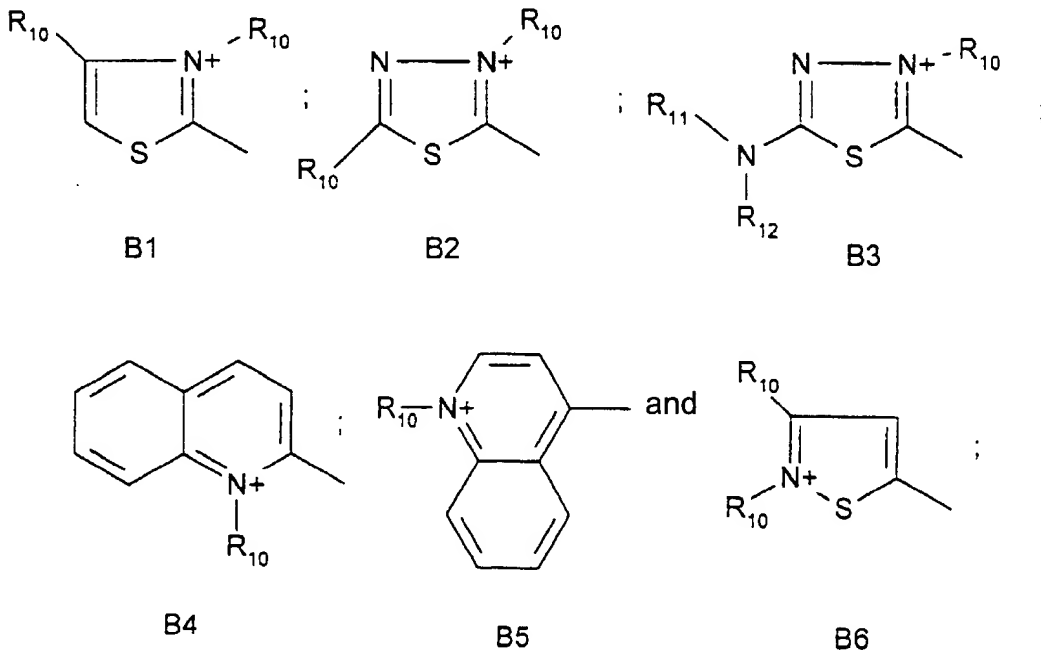
$R_6$  is a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

$R_7$  is chosen from a hydrogen atom; an alkyl radical which is unsubstituted or substituted with a -CN radical or with an amino group; and a 4'-aminophenyl radical, or forms with  $R_6$  a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with a  $C_1$ - $C_4$  alkyl radical,

$R_8$  and  $R_9$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from bromine, chlorine, fluorine, and iodine; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and a -CN radical,

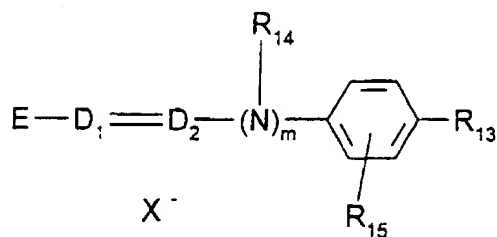
$X^-$  is an anion,

B represents a group chosen from the following structures B1 to B6:

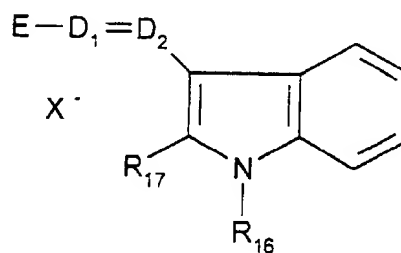


in which  $R_{10}$  is a  $C_1$ - $C_4$  alkyl radical,  $R_{11}$  and  $R_{12}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical;

c) cationic direct dyes of the following formula (III) and formula (III'):



(III)



(III')

in which:

$R_{13}$  is chosen from a hydrogen atom, a  $C_1$ - $C_4$  alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

$R_{14}$  is a hydrogen atom, a  $C_1$ - $C_4$  alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl group,

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R<sub>16</sub> and R<sub>17</sub>, which are identical or different, are a hydrogen atom or a C<sub>1</sub>-C<sub>4</sub> alkyl radical,

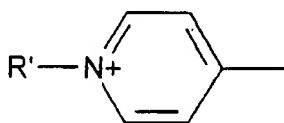
D<sub>1</sub> and D<sub>2</sub>, which are identical or different, are a nitrogen atom or a -CH group,

$$m = 0 \text{ or } 1,$$

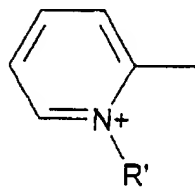
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

E is a group chosen from the following structures E1 to E8:

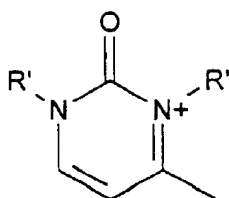


E1

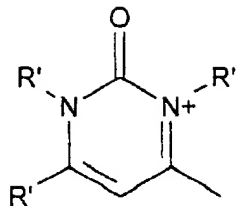


E2

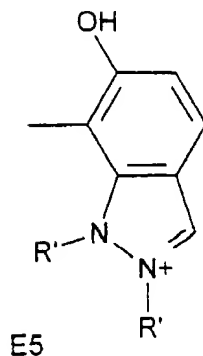
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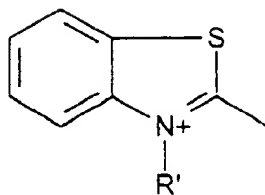
E3



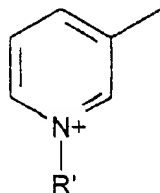
E4



E5

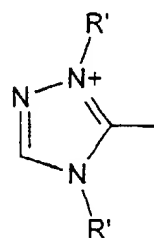


E6



E7

and



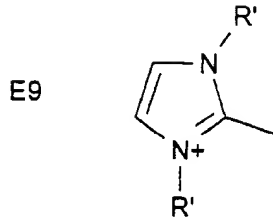
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

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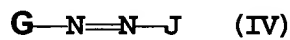
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when  $m = 0$  and  $D_1$  is a nitrogen atom, then E may also be a group having the following structure E9:



in which  $R'$  is a  $C_1$ - $C_4$  alkyl radical, and

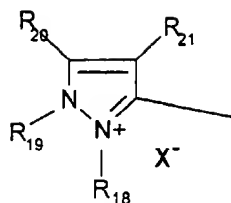
**d) cationic direct dyes of formula (IV):**



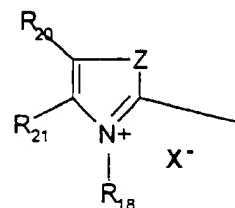
in which:

**the symbol G** is a group chosen from the following structures  $G_1$  to  $G_3$ :

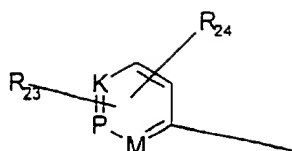
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G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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*ag*  
*cont*

$R_{19}$  is a  $C_1$ - $C_4$  alkyl radical or a phenyl radical;

$R_{20}$  and  $R_{21}$ , which are identical or different, are chosen from a  $C_1$ - $C_4$  alkyl radical and a phenyl radical, or form together in  $G_1$  a benzene ring which is substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy and  $NO_2$  radicals, or form together in  $G_2$  a benzene ring which is optionally substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy and  $NO_2$  radicals;

$R_{20}$  may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an  $-NR_{19}$  group;

M is a group chosen from  $-CH$ ;  $-CR$  wherein R is  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$ ;

K is a group chosen from  $-CH$ ;  $-CR$  wherein R is  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$ ;

P is a group chosen from  $-CH$ ;  $-CR$  wherein R denotes  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$  where r is zero or 1;

$R_{22}$  is chosen from an  $O^-$  atom, a  $C_1$ - $C_4$  alkoxy radical and a  $C_1$ - $C_4$  alkyl radical;

$R_{23}$  and  $R_{24}$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and an  $-NO_2$  radical;

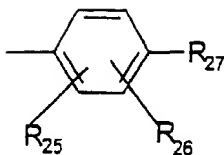
$X^-$  is an anion;

**wherein J is chosen from:**

**-(a)** a group having the following structure  $J_1$ :

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J<sub>1</sub>

in which structure J<sub>1</sub>,

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

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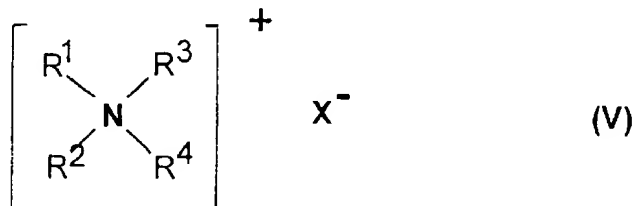
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R<sub>29</sub> and R<sub>30</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, and a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical; and

**-(b)** a 5- or 6- membered nitrogen-containing heterocycle group which optionally contains additional heteroatoms, carbonyl-containing groups, or a mixture of additional heteroatoms and carbonyl-containing groups and which is unsubstituted or substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, amino and phenyl radicals, and

(ii) at least one quaternary ammonium salt chosen from:

(ii)<sub>1</sub> - quaternary ammonium salts of the following formula (V):



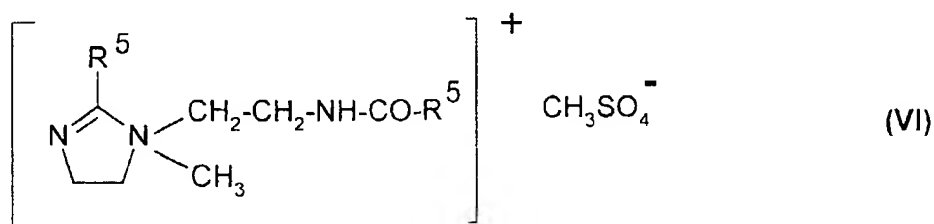
in which

the radicals R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxycarbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl,

aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is a radical comprising 8 to 30 carbon atoms;

X<sup>-</sup> is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



in which

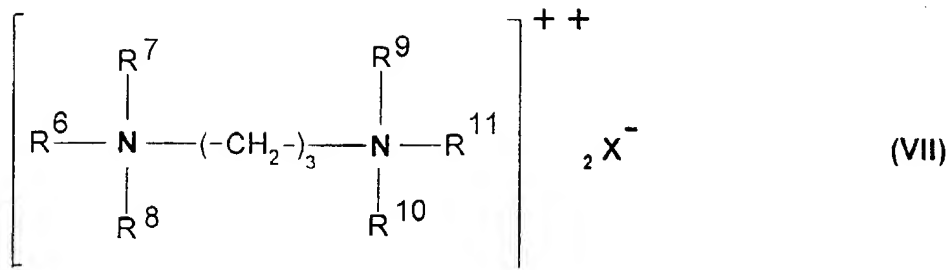
R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):

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in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

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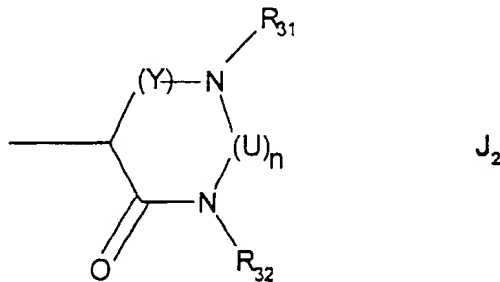
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33. A composition according to Claim 32, wherein in the definition of said at least one cationic direct dye of formulas (I), (II), (III), and (III'), X- is chosen from chloride, methylsulphate, and acetate.

34. A composition according to claim 32, wherein in the definition of said cationic direct dyes of formula (IV), in G<sub>1</sub> and G<sub>2</sub>, X<sup>-</sup> is chosen from chloride, iodide, methylsulphate, ethylsulphate, acetate and perchlorate.

35. A composition according to Claim 32, wherein in the definition of said cationic direct dyes of formula (IV), the 5- or 6- membered nitrogen containing heterocycle group of J is chosen from groups having the structure J<sub>2</sub> below:



in which structure J<sub>2</sub>,

R<sub>31</sub> and R<sub>32</sub>, which are identical or different, are chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, and a phenyl radical;

Y is a -CO- radical or the radical  $\begin{array}{c} \text{CH}_3 \\ | \\ \text{---C=} \end{array}$ ; and

n = 0 or 1, wherein when n is 1, U is a -CO- radical.

36. A composition according to Claim 32, wherein said at least one cationic direct dye is present in an amount ranging from 0.001 to 10% by weight of the total weight of the composition.

37. A composition according to Claim 36, wherein said at least one cationic direct dye is present in an amount ranging from 0.005 to 5% by weight of the total weight of the composition.

38. A composition according to Claim 32, wherein the quaternary ammonium salt of formula (V) is a dialkyldimethylammonium or alkyltrimethylammonium salt in which the alkyl radical comprises 12 to 22 carbon atoms.

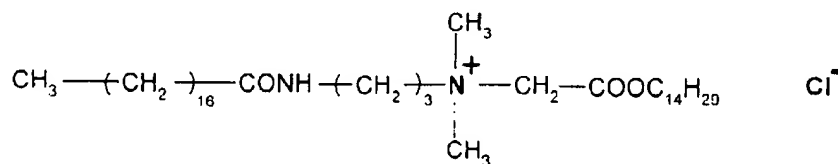
39. A composition according to Claim 38, wherein the quaternary ammonium salt of formula (V) is distearyldimethylammonium chloride, cetyltrimethylammonium chloride, or behenyltrimethylammonium chloride.

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40. A composition according to Claim 32, wherein the quaternary ammonium salt of formula (V) is a di(C<sub>1</sub>-C<sub>2</sub> alkyl)(C<sub>12</sub>-C<sub>22</sub>alkyl)hydroxy(C<sub>1</sub>-C<sub>2</sub>alkyl)ammonium salt.

41. A composition according to Claim 40, wherein the quaternary ammonium salt of formula (V) is oleocetyldimethylhydroxyethylammonium chloride.

42. A composition according to Claim 32, wherein the quaternary ammonium salt of formula (V) is stearamidopropyldimethyl (myristyl acetate) ammonium chloride of formula:



43. A composition according to Claim 32, wherein said at least one quaternary ammonium salt is present in an amount ranging from 0.01 to 10% by weight of the total weight of the composition.

44. A composition according to Claim 43, wherein said at least one quaternary ammonium salt is present in an amount ranging from 0.05 to 5% by weight of the total weight of the composition.

45. A composition according to Claim 32, wherein said medium suitable for dyeing comprises water or a mixture of water and at least one organic solvent.

46. A composition according to Claim 32, wherein the composition has a pH ranging from 2 to 11.

47. A composition according to Claim 46, wherein the pH ranges from 5 to 10.

48. A composition according to Claim 32, further comprising at least one oxidation base chosen from para-phenylenediamines, bis-phenylalkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases.

49. A composition according to Claim 48, wherein said at least one oxidation base is present in an amount ranging from 0.0005 to 12% by weight of the total weight of the composition.

50. A composition according to Claim 49, wherein said at least one oxidation base is present in an amount ranging from 0.005 to 6% by weight of the total weight of the composition.

51. A composition according to Claim 48, further comprising at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols and heterocyclic couplers.

52. A composition according to Claim 51, wherein said at least one coupler is present in an amount ranging from 0.0001 to 10% by weight of the total weight of the composition.

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[illegible]

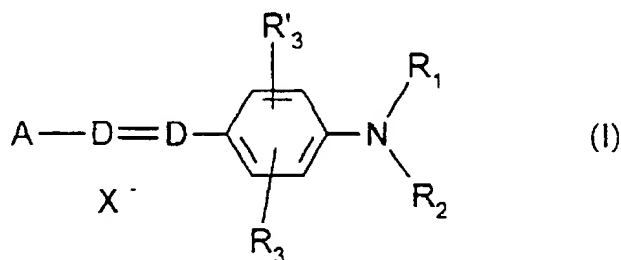
Variable	Unit	Value	Unit	Value
Age	yr	25.0	Age	yr
Height	cm	170.0	Height	cm
Weight	kg	70.0	Weight	kg
Body mass index	kg/m <sup>2</sup>	24.0	Body mass index	kg/m <sup>2</sup>
Heart rate	beats/min	70.0	Heart rate	beats/min
Stroke volume	L	0.07	Stroke volume	L
Cardiac output	L/min	5.0	Cardiac output	L/min
Mean arterial pressure	mmHg	93.0	Mean arterial pressure	mmHg
Systolic blood pressure	mmHg	120.0	Systolic blood pressure	mmHg
Diastolic blood pressure	mmHg	80.0	Diastolic blood pressure	mmHg
Pulse pressure	mmHg	40.0	Pulse pressure	mmHg
Time to peak	s	10.0	Time to peak	s
Time to 50% peak	s	5.0	Time to 50% peak	s
Time to 25% peak	s	2.5	Time to 25% peak	s
Time to 10% peak	s	1.0	Time to 10% peak	s
Time to 5% peak	s	0.5	Time to 5% peak	s
Time to 2.5% peak	s	0.25	Time to 2.5% peak	s
Time to 1% peak	s	0.1	Time to 1% peak	s
Time to 0.5% peak	s	0.05	Time to 0.5% peak	s
Time to 0.25% peak	s	0.025	Time to 0.25% peak	s
Time to 0.1% peak	s	0.01	Time to 0.1% peak	s
Time to 0.05% peak	s	0.005	Time to 0.05% peak	s
Time to 0.025% peak	s	0.0025	Time to 0.025% peak	s
Time to 0.01% peak	s	0.001	Time to 0.01% peak	s
Time to 0.005% peak	s	0.0005	Time to 0.005% peak	s
Time to 0.0025% peak	s	0.00025	Time to 0.0025% peak	s
Time to 0.001% peak	s	0.0001	Time to 0.001% peak	s
Time to 0.0005% peak	s	0.00005	Time to 0.0005% peak	s
Time to 0.00025% peak	s	0.000025	Time to 0.00025% peak	s
Time to 0.0001% peak	s	0.00001	Time to 0.0001% peak	s
Time to 0.00005% peak	s	0.000005	Time to 0.00005% peak	s
Time to 0.000025% peak	s	0.0000025	Time to 0.000025% peak	s
Time to 0.00001% peak	s	0.000001	Time to 0.00001% peak	s
Time to 0.000005% peak	s	0.0000005	Time to 0.000005% peak	s
Time to 0.0000025% peak	s	0.00000025	Time to 0.0000025% peak	s
Time to 0.000001% peak	s	0.0000001	Time to 0.000001% peak	s
Time to 0.0000005% peak	s	0.00000005	Time to 0.0000005% peak	s
Time to 0.00000025% peak	s	0.000000025	Time to 0.00000025% peak	s
Time to 0.0000001% peak	s	0.00000001	Time to 0.0000001% peak	s
Time to 0.00000005% peak	s	0.000000005	Time to 0.00000005% peak	s
Time to 0.000000025% peak	s	0.0000000025	Time to 0.000000025% peak	s
Time to 0.00000001% peak	s	0.000000001	Time to 0.00000001% peak	s
Time to 0.000000005% peak	s	0.0000000005	Time to 0.000000005% peak	s
Time to 0.0000000025% peak	s	0.00000000025	Time to 0.0000000025% peak	s
Time to 0.000000001% peak	s	0.0000000001	Time to 0.000000001% peak	s
Time to 0.0000000005% peak	s	0.00000000005	Time to 0.0000000005% peak	s
Time to 0.00000000025% peak	s	0.000000000025	Time to 0.00000000025% peak	s
Time to 0.0000000001% peak	s	0.00000000001	Time to 0.0000000001% peak	s
Time to 0.00000000005% peak	s	0.000000000005	Time to 0.00000000005% peak	s
Time to 0.000000000025% peak	s	0.0000000000025	Time to 0.000000000025% peak	s
Time to 0.00000000001% peak	s	0.000000000001	Time to 0.00000000001% peak	s
Time to 0.000000000005% peak	s	0.0000000000005	Time to 0.000000000005% peak	s
Time to 0.0000000000025% peak	s	0.00000000000025	Time to 0.0000000000025% peak	s
Time to 0.000000000001% peak	s	0.0000000000001	Time to 0.000000000001% peak	s
Time to 0.0000000000005% peak	s	0.00000000000005	Time to 0.0000000000005% peak	s
Time to 0.00000000000025% peak	s	0.000000000000025	Time to 0.00000000000025% peak	s
Time to 0.0000000000001% peak	s	0.00000000000001	Time to 0.0000000000001% peak	s
Time to 0.00000000000005% peak	s	0.000000000000005	Time to 0.00000000000005% peak	s
Time to 0.000000000000025% peak	s	0.000000000000002		

61. A method for dyeing keratinous fibers, comprising:

applying to said keratinous fibers for a time sufficient to develop a desired color,  
a composition comprising, in a medium suitable for dyeing,

(i) at least one cationic direct dye chosen from:

a) cationic direct dyes of formula (I):



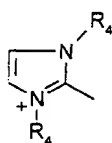
in which:

D is a nitrogen atom or a -CH group,

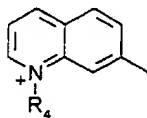
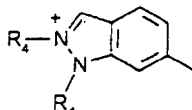
R<sub>1</sub> and R<sub>2</sub>, which are identical or different, are chosen from a hydrogen atom; a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a -CN, -OH or -NH<sub>2</sub> radical or form with each other or a carbon atom of the benzene ring a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with at least one C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a 4'-aminophenyl radical,

$X^-$  is an anion,

A is a group chosen from the following structures  $A_1$  to  $A_{19}$ :



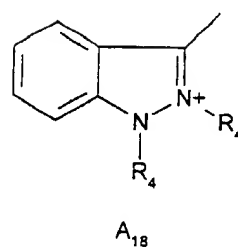
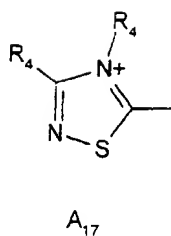
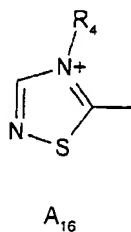
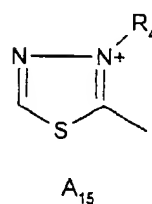
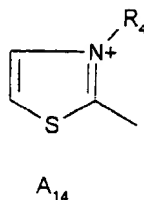
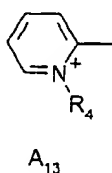
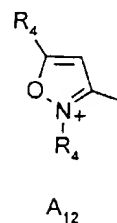
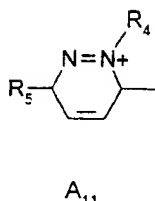
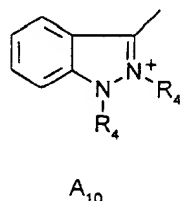
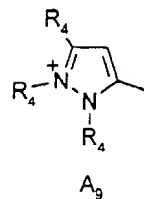
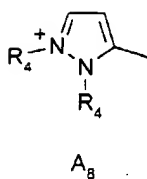
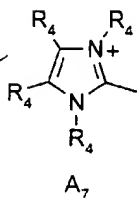
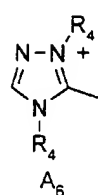
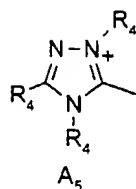
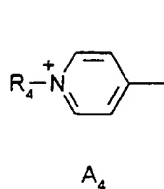
A.

 $A_2$ 

A.



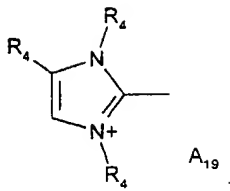
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Cont*



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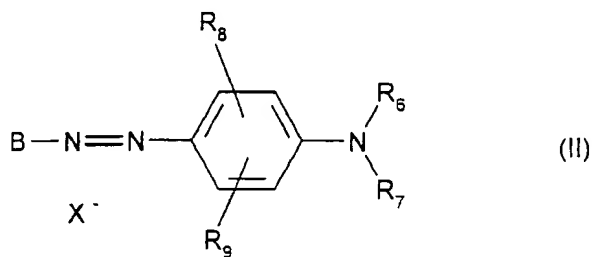
and



in which R<sub>4</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a hydroxyl radical and R<sub>5</sub> is a C<sub>1</sub>-C<sub>4</sub> alkoxy radical,

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

**b) cationic direct dyes of formula (II):**

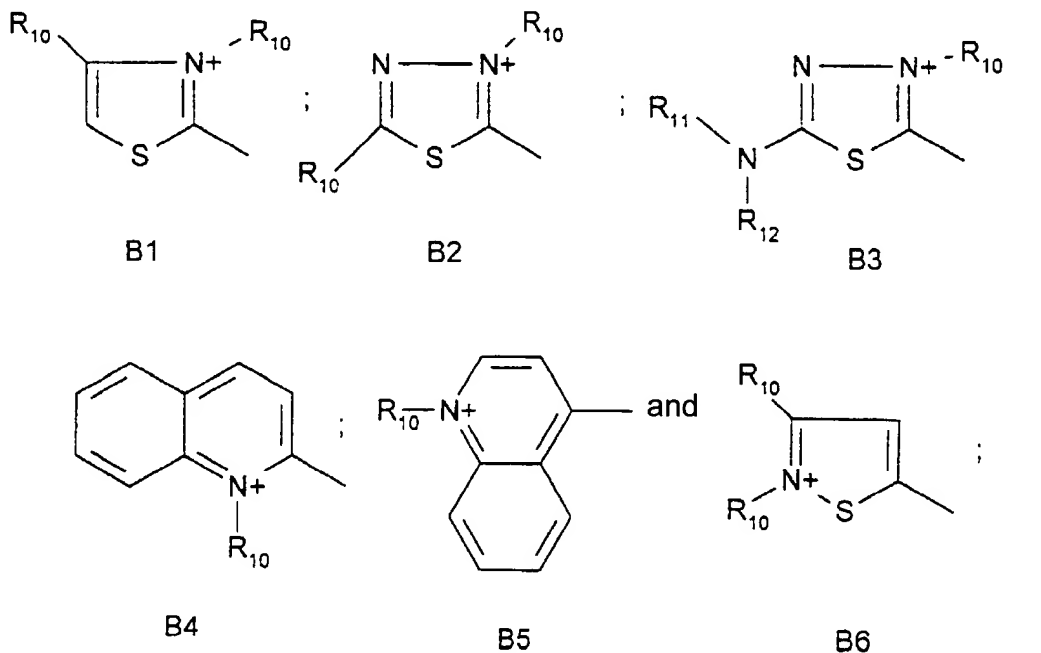


in which:

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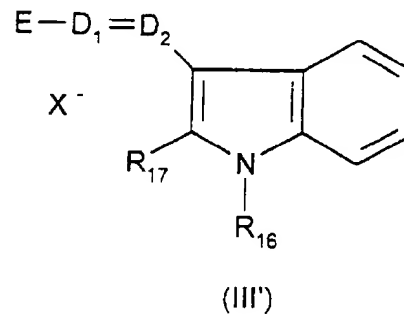
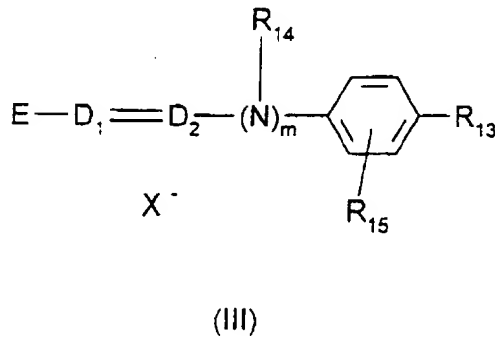
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B represents a group chosen from the following structures B1 to B6:



in which  $R_{10}$  is a  $C_1$ - $C_4$  alkyl radical,  $R_{11}$  and  $R_{12}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical;

c) cationic direct dyes of the following formula (III) and formula (III'):



in which:

$R_{13}$  is chosen from a hydrogen atom, a  $C_1$ - $C_4$  alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

$R_{14}$  is a hydrogen atom, a  $C_1$ - $C_4$  alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl group,

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R<sub>16</sub> and R<sub>17</sub>, which are identical or different, are a hydrogen atom or a C<sub>1</sub>-C<sub>4</sub> alkyl radical,

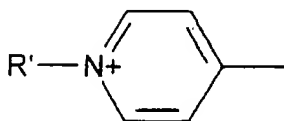
D<sub>1</sub> and D<sub>2</sub>, which are identical or different, are a nitrogen atom or a -CH group,

$$m = 0 \text{ or } 1,$$

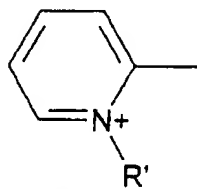
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

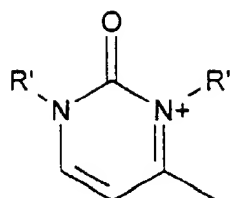
E is a group chosen from the following structures E1 to E8:



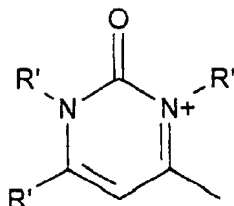
E1



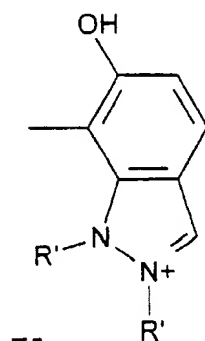
E2



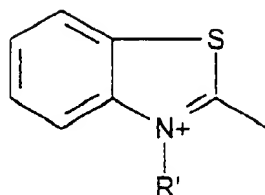
E3



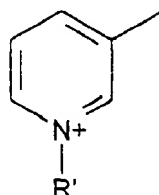
E4



E5

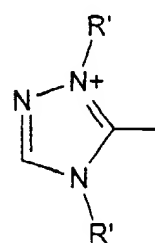


E6



E7

and



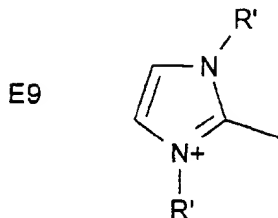
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

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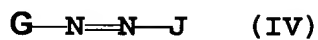
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when  $m = 0$  and  $D_1$  is a nitrogen atom, then E may also be a group having the following structure E9:



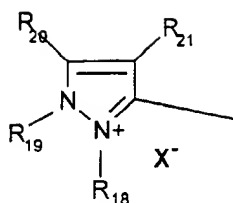
in which  $R'$  is a  $C_1$ - $C_4$  alkyl radical, and

**d) cationic direct dyes of formula (IV):**

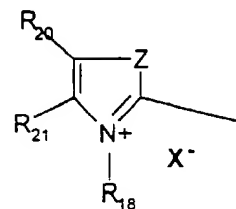


in which:

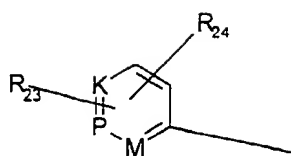
**the symbol G** is a group chosen from the following structures  $G_1$  to  $G_3$ :



G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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*A9*  
*Con4*  
R<sub>19</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a phenyl radical;

R<sub>20</sub> and R<sub>21</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical and a phenyl radical, or form together in G<sub>1</sub> a benzene ring which is substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals, or form together in G<sub>2</sub> a benzene ring which is optionally substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals;

R<sub>20</sub> may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an -NR<sub>19</sub> group;

M is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>);

K is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub>;

P is a group chosen from -CH; -CR wherein R denotes C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub> where r is zero or 1;

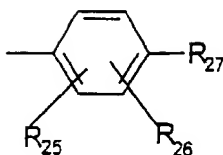
R<sub>22</sub> is chosen from an O<sup>-</sup> atom, a C<sub>1</sub>-C<sub>4</sub> alkoxy radical and a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

R<sub>23</sub> and R<sub>24</sub>, which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and an -NO<sub>2</sub> radical;

X<sup>-</sup> is an anion;

**wherein J is chosen from:**

**-(a) a group having the following structure J<sub>1</sub>:**



J<sub>1</sub>

in which structure J<sub>1</sub>,

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

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[illegible]

**(ii) at least one quaternary ammonium salt chosen from:**

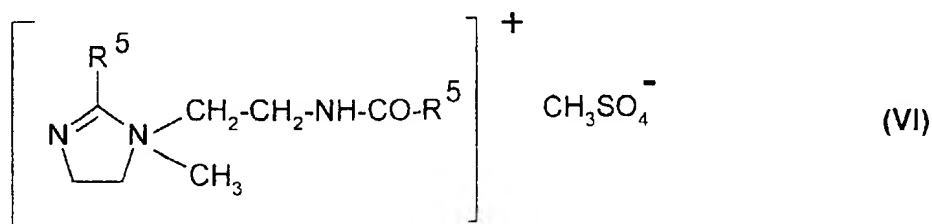
$$\left[ \begin{array}{cc} R^1 & R^3 \\ & N \\ R^2 & R^4 \end{array} \right]^+ X^- \quad (V)$$

the radicals R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxycarbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl,

aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is a radical comprising 8 to 30 carbon atoms;

X<sup>-</sup> is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



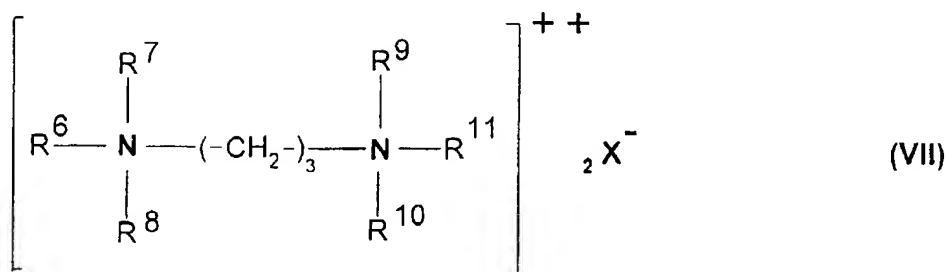
in which

R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):

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in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

62. A method according to claim 61, further comprising rinsing said keratinous fibers after applying said composition thereon.

63. A method according to claim 62, further comprising washing said keratinous fibers with shampoo after said rinsing; and rinsing again said keratinous fibers after said washing.

64. A method according to claim 63, further comprising, after said washing and rinsing, drying said keratinous fibers.

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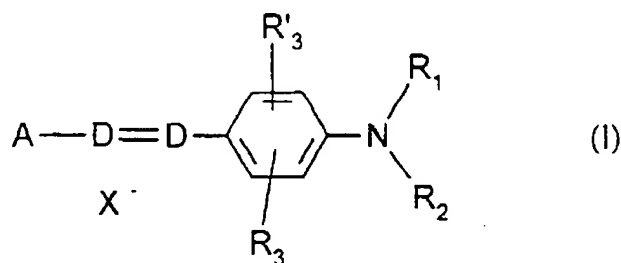
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66. A method according to claim 65, wherein said human keratinous fibers are hair.

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Cont

67. A method for dyeing keratinous fibers, comprising  
separately storing a first composition and a second composition;  
mixing said first composition with said second composition before applying the  
resultant mixture to said keratinous fibers; and  
applying said mixture to the keratinous fibers,  
wherein said first composition comprises, in a medium suitable for dyeing, at  
least one oxidation base and  
at least one cationic direct dye chosen from:

**a) cationic direct dyes of formula (I):**



in which:

D is a nitrogen atom or a -CH group,

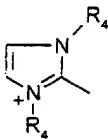
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$R_1$  and  $R_2$ , which are identical or different, are chosen from a hydrogen atom; a  $C_1$ - $C_4$  alkyl radical which is unsubstituted or substituted with a  $-CN$ ,  $-OH$  or  $-NH_2$  radical or form with each other or a carbon atom of the benzene ring a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl radical; and a 4'-aminophenyl radical,

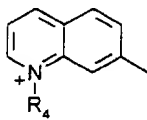
$R_3$  and  $R'_3$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a cyano radical; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and an acetyloxy radical,

$X^-$  is an anion,

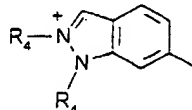
A is a group chosen from the following structures  $A_1$  to  $A_{19}$ :



$A_1$

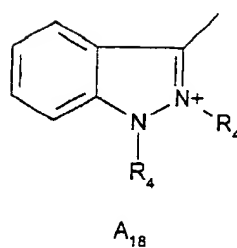
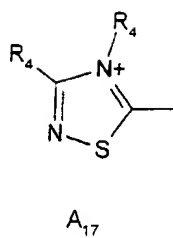
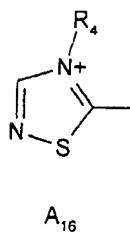
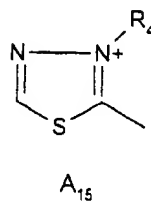
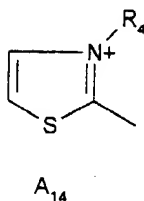
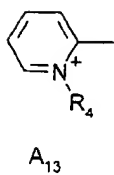
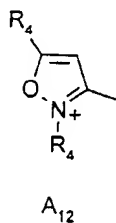
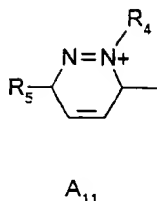
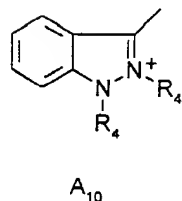
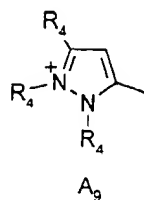
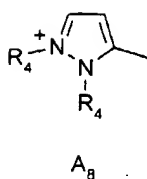
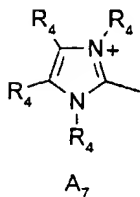
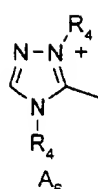
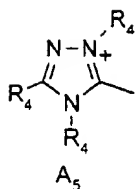
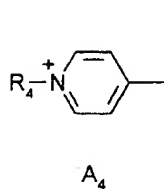


$A_2$



$A_3$





Cc1cc(R4)n(R4)c1[N+]([R4])= A<sub>19</sub>

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

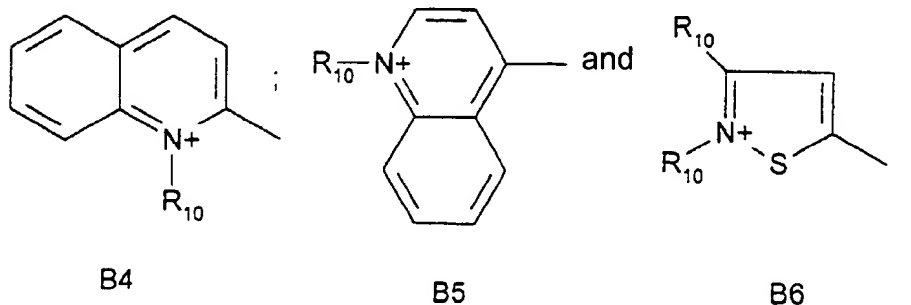
$$\text{B}-\text{N}=\text{N}-\text{C}_6\text{H}_2(\text{R}_8)(\text{R}_9)-\text{N}(\text{R}_6)(\text{R}_7) \quad (\text{II})$$

[illegible]

R<sub>7</sub> is chosen from a hydrogen atom; an alkyl radical which is unsubstituted or substituted with a -CN radical or with an amino group; and a 4'-aminophenyl radical, and R<sub>6</sub> a heterocycle optionally containing at least one of oxygen and nitrogen and is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical,

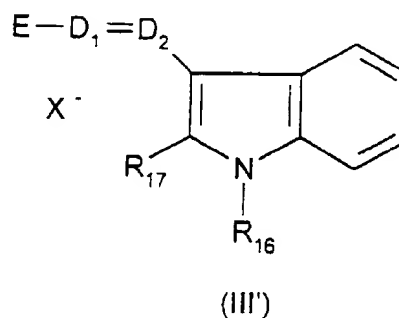
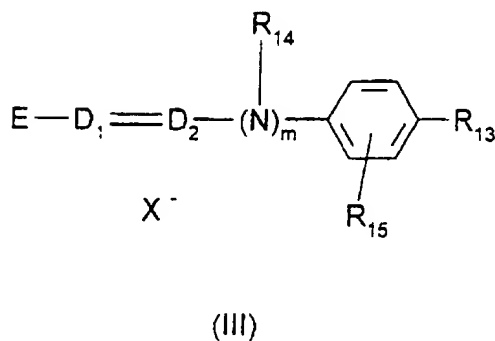
R<sub>8</sub> and R<sub>9</sub> , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from bromine, chlorine, fluorine, and iodine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a -CN radical,

B represents a group chosen from the following structures B1 to B6:



in which  $R_{10}$  is a  $C_1$ - $C_4$  alkyl radical,  $R_{11}$  and  $R_{12}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical;

c) cationic direct dyes of the following formula (III) and formula (III'):



in which:

$R_{13}$  is chosen from a hydrogen atom, a  $C_1$ - $C_4$  alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

$R_{14}$  is a hydrogen atom, a  $C_1$ - $C_4$  alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl group,

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$R_{15}$  is a hydrogen or halogen atom chosen from bromine, chlorine, fluorine, and iodine,

$R_{16}$  and  $R_{17}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

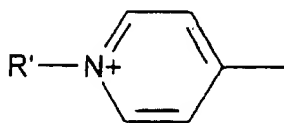
$D_1$  and  $D_2$ , which are identical or different, are a nitrogen atom or a -CH group,

$m = 0$  or  $1$ ,

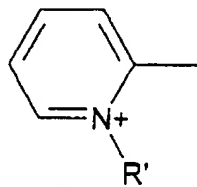
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

E is a group chosen from the following structures E1 to E8:



E1



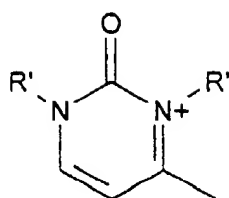
E2

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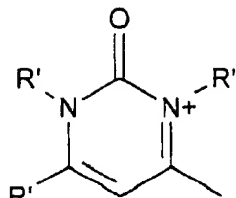
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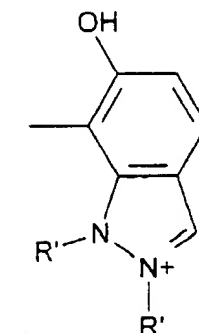
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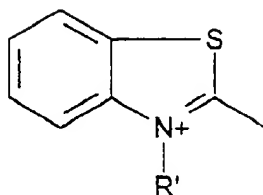
E3



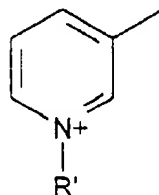
E4



E5

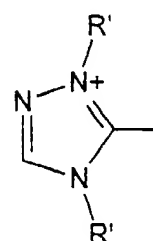


E6



E7

and



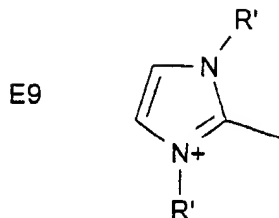
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

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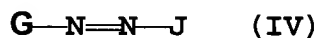
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when  $m = 0$  and  $D_1$  is a nitrogen atom, then E may also be a group having the following structure E9:



in which  $R'$  is a  $C_1$ - $C_4$  alkyl radical, and

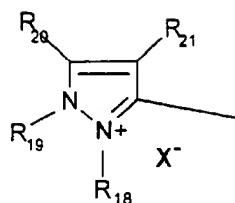
**d) cationic direct dyes of formula (IV):**



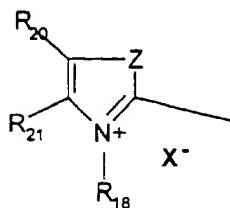
in which:

**the symbol G** is a group chosen from the following structures  $G_1$  to  $G_3$ :

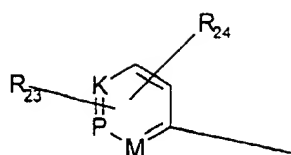
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G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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$R_{19}$  is a  $C_1$ - $C_4$  alkyl radical or a phenyl radical;

$R_{20}$  and  $R_{21}$ , which are identical or different, are chosen from a  $C_1$ - $C_4$  alkyl radical and a phenyl radical, or form together in  $G_1$  a benzene ring which is substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy and  $NO_2$  radicals, or form together in  $G_2$  a benzene ring which is optionally substituted with at least one radical chosen from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  alkoxy and  $NO_2$  radicals;

$R_{20}$  may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an  $-NR_{19}$  group;

M is a group chosen from  $-CH$ ;  $-CR$  wherein R is  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$ ;

K is a group chosen from  $-CH$ ;  $-CR$  wherein R is  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$ ;

P is a group chosen from  $-CH$ ;  $-CR$  wherein R denotes  $C_1$ - $C_4$  alkyl; and  $-NR_{22}(X^-)_r$  where r is zero or 1;

$R_{22}$  is chosen from an  $O^-$  atom, a  $C_1$ - $C_4$  alkoxy radical and a  $C_1$ - $C_4$  alkyl radical;

$R_{23}$  and  $R_{24}$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and an  $-NO_2$  radical;

$X^-$  is an anion;

**wherein J is chosen from:**

**-(a)** a group having the following structure  $J_1$ :

J.

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

R<sub>29</sub> and R<sub>30</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, and a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical; and

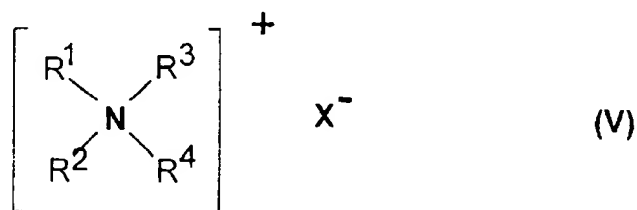
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-(b) a 5- or 6- membered nitrogen-containing heterocycle group which optionally contains additional heteroatoms, carbonyl-containing groups, or a mixture of additional heteroatoms and carbonyl-containing groups and which is unsubstituted or substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, amino and phenyl radicals, and

wherein said second composition comprises, in a medium suitable for dyeing, at least one oxidizing agent; and

wherein either said first composition or said second composition further comprises at least one quaternary ammonium salt chosen from:

(ii)<sub>1</sub> - quaternary ammonium salts of the following formula (V):



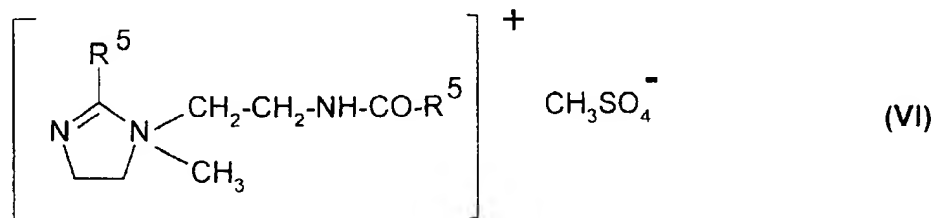
in which

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the radicals  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$ , which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxycarbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl, aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  is a radical comprising 8 to 30 carbon atoms;

$X^-$  is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

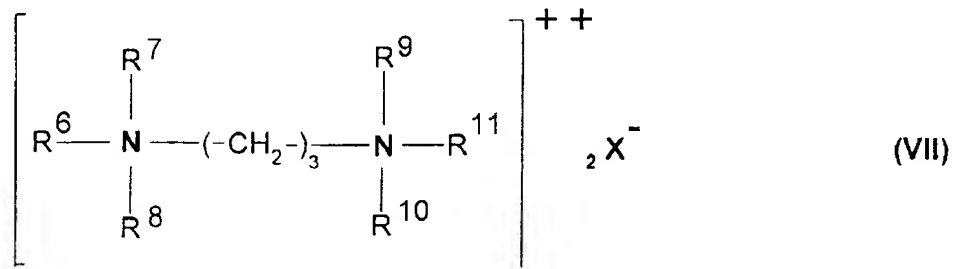
(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



in which

R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):



in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

68. A method according to claim 67, wherein said keratinous fibers are human keratinous fibers.

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69. A method according to claim 68, wherein said human keratinous fibers are

hair.

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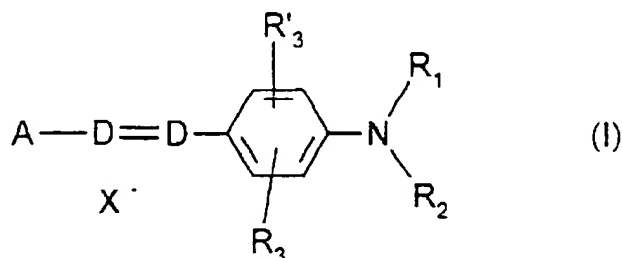
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70. A method for dyeing keratinous fibers, comprising  
separately storing a first composition and a second composition;  
mixing said first composition with said second composition before applying the  
resultant mixture to said keratinous fibers; and  
applying said mixture to the keratinous fibers,  
wherein said first composition comprises, in a medium suitable for dyeing:  
at least one cationic direct dye chosen from:

**a) cationic direct dyes of formula (I):**



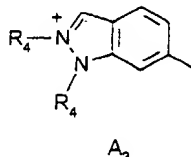
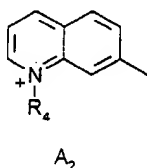
in which:

D is a nitrogen atom or a -CH group,

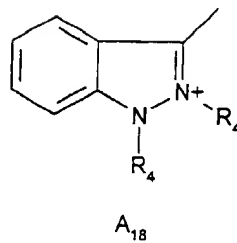
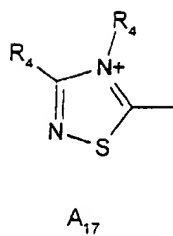
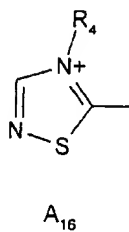
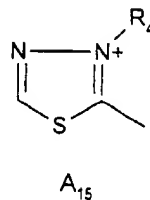
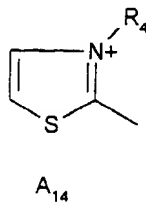
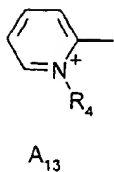
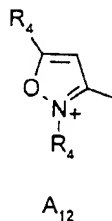
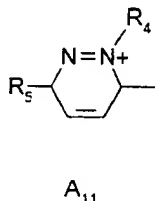
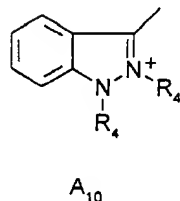
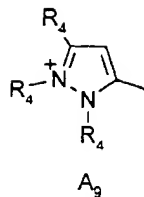
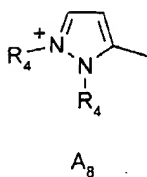
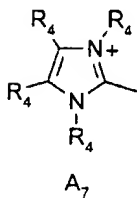
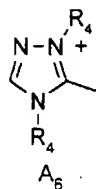
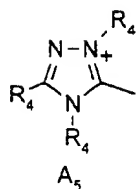
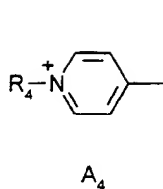
R<sub>1</sub> and R<sub>2</sub>, which are identical or different, are chosen from a hydrogen  
atom; a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a -CN, -OH or -NH<sub>2</sub>

R<sub>3</sub> and R'<sub>3</sub>, which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a cyano radical; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and an acetyloxy radical,

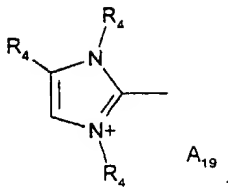
A is a group chosen from the following structures  $A_1$  to  $A_{19}$ :





[illegible]

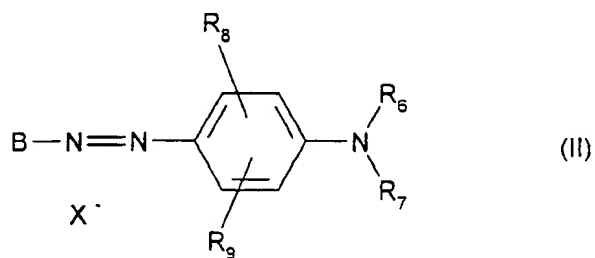
and



in which R<sub>4</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a hydroxyl radical and R<sub>5</sub> is a C<sub>1</sub>-C<sub>4</sub> alkoxy radical,

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

**b) cationic direct dyes of formula (II):**



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in which:

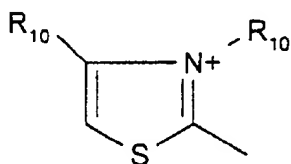
$R_6$  is a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

$R_7$  is chosen from a hydrogen atom; an alkyl radical which is unsubstituted or substituted with a -CN radical or with an amino group; and a 4'-aminophenyl radical, or forms with  $R_6$  a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with a  $C_1$ - $C_4$  alkyl radical,

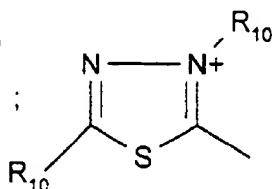
$R_8$  and  $R_9$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from bromine, chlorine, fluorine, and iodine; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and a -CN radical,

$X^-$  is an anion,

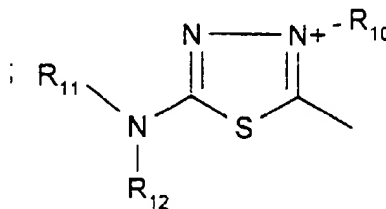
B represents a group chosen from the following structures B1 to B6:



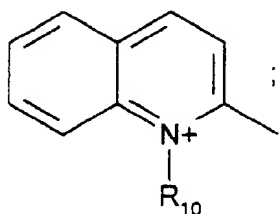
B1



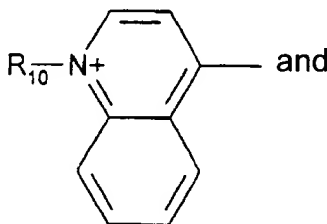
B2



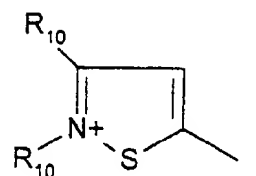
B3



B4



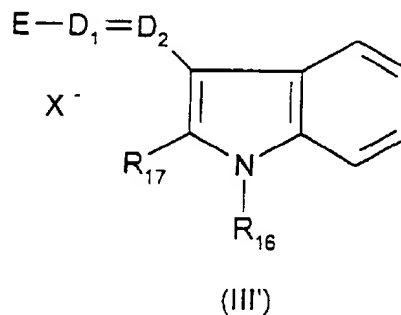
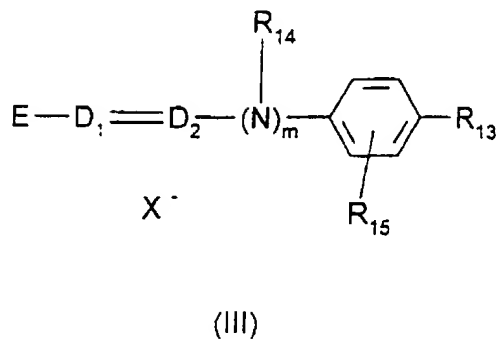
B5



B6

in which  $R_{10}$  is a  $C_1$ - $C_4$  alkyl radical,  $R_{11}$  and  $R_{12}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical;

**c) cationic direct dyes of the following formula (III) and formula (III'):**



in which:

$R_{13}$  is chosen from a hydrogen atom, a  $C_1$ - $C_4$  alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

$R_{14}$  is a hydrogen atom, a  $C_1$ - $C_4$  alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl group,

R<sub>16</sub> and R<sub>17</sub>, which are identical or different, are a hydrogen atom or a C<sub>1</sub>-C<sub>4</sub> alkyl radical,

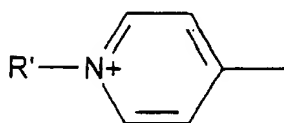
D<sub>1</sub> and D<sub>2</sub>, which are identical or different, are a nitrogen atom or a -CH group,

$$m = 0 \text{ or } 1,$$

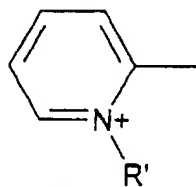
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

E is a group chosen from the following structures E1 to E8:

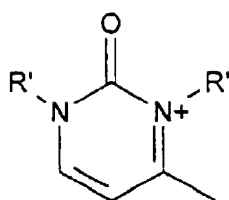


E1

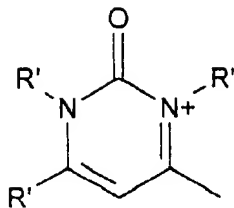


E2

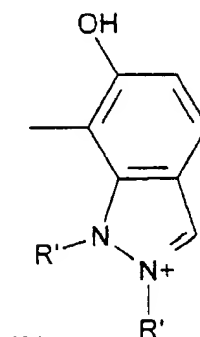
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*Cont*



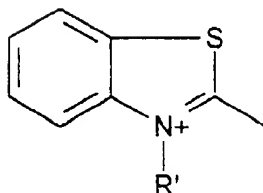
E3



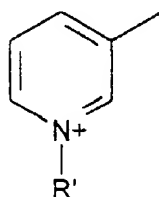
E4



E5

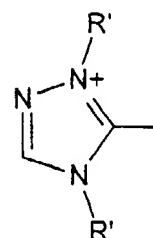


E6



E7

and



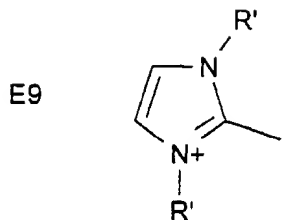
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

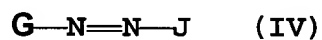
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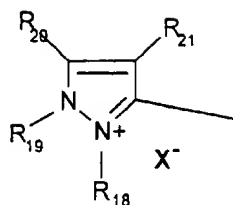
the following structure E9:



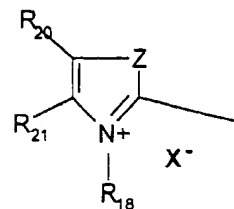
**d) cationic direct dyes of formula (IV):**



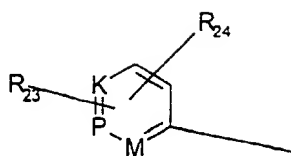
**the symbol  $\mathbf{G}$**  is a group chosen from the following structures  $\mathbf{G}_1$  to  $\mathbf{G}_3$ :



G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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R<sub>19</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a phenyl radical;

R<sub>20</sub> and R<sub>21</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical and a phenyl radical, or form together in G<sub>1</sub> a benzene ring which is substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals, or form together in G<sub>2</sub> a benzene ring which is optionally substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals;

R<sub>20</sub> may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an -NR<sub>19</sub> group;

M is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>);

K is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub>;

P is a group chosen from -CH; -CR wherein R denotes C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub> where r is zero or 1;

R<sub>22</sub> is chosen from an O<sup>-</sup> atom, a C<sub>1</sub>-C<sub>4</sub> alkoxy radical and a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

R<sub>23</sub> and R<sub>24</sub>, which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and an -NO<sub>2</sub> radical;

X<sup>-</sup> is an anion;

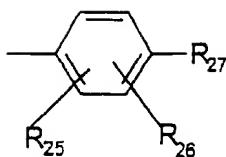
**wherein J is chosen from:**

**-(a) a group having the following structure J<sub>1</sub>:**

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J<sub>1</sub>

in which structure J<sub>1</sub>,

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

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Con4*

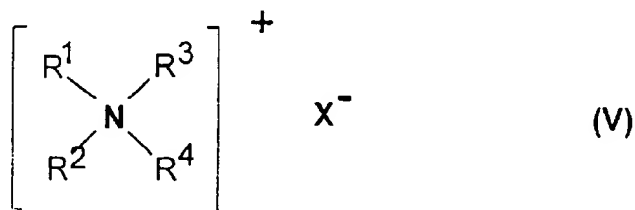
R<sub>29</sub> and R<sub>30</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, and a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical; and

**-(b)** a 5- or 6- membered nitrogen-containing heterocycle group which optionally contains additional heteroatoms, carbonyl-containing groups, or a mixture of additional heteroatoms and carbonyl-containing groups and which is unsubstituted or substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, amino and phenyl radicals, and

wherein said second composition comprises, in a medium suitable for dyeing, at least one oxidizing agent; and

wherein either said first composition or said second composition further comprises at least one quaternary ammonium salt chosen from:

(ii)<sub>1</sub> - quaternary ammonium salts of the following formula (V):



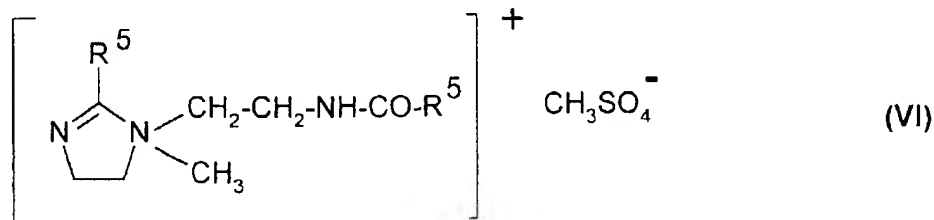
in which

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cont

the radicals  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$ , which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxycarbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl, aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  is a radical comprising 8 to 30 carbon atoms;

$X^-$  is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

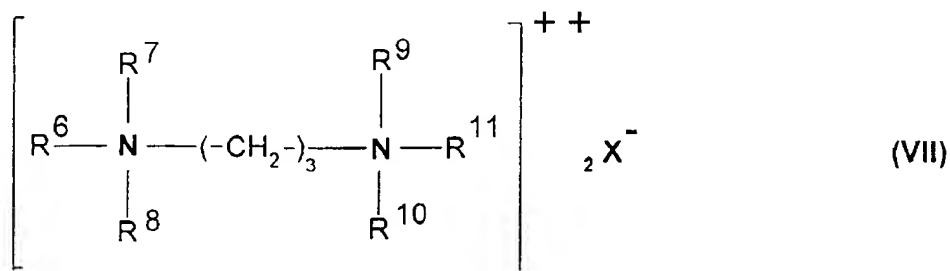
(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



in which

R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):



in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

71. A method according to claim 70, wherein said keratinous fibers are human keratinous fibers.

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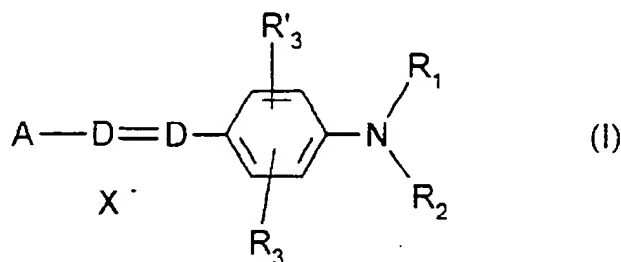
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73. A multicompartment dyeing kit wherein a first compartment contains a first composition and a second compartment contains a second composition,

wherein said first composition comprises, in a medium suitable for dyeing, at least one oxidation base and

at least one cationic direct dye chosen from:

**a) cationic direct dyes of formula (I):**



in which:

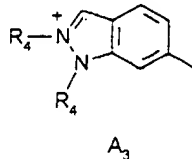
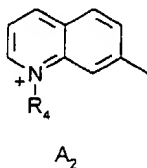
D is a nitrogen atom or a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which are identical or different, are chosen from a hydrogen atom; a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a -CN, -OH or -NH<sub>2</sub> radical or form with each other or a carbon atom of the benzene ring a heterocycle

[illegible]

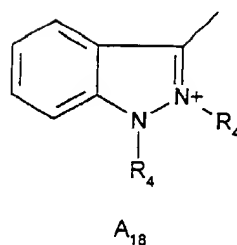
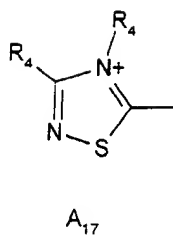
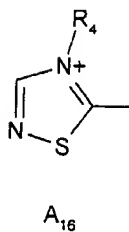
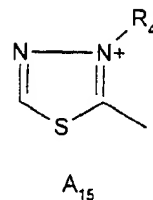
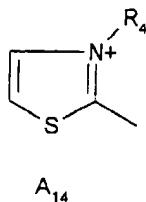
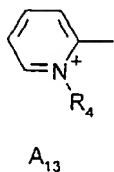
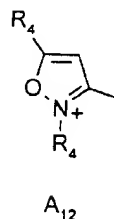
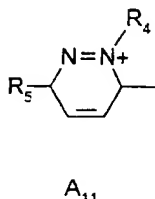
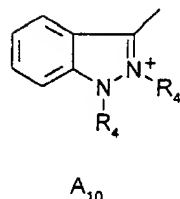
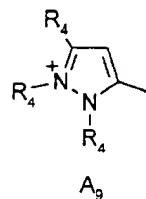
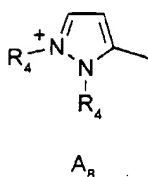
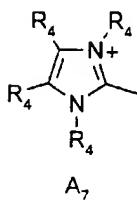
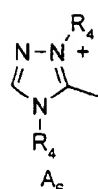
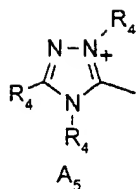
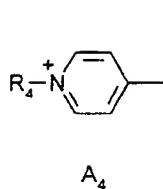
$X^-$  is an anion,

A is a group chosen from the following structures  $A_1$  to  $A_{19}$ :





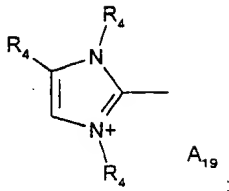
A9  
Cont



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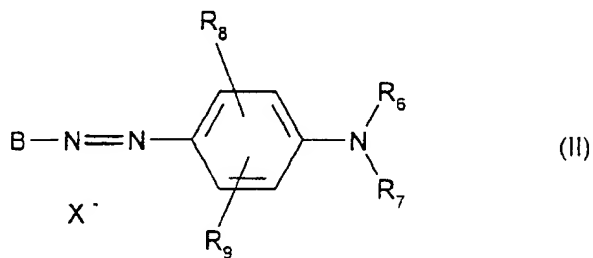
and



in which R<sub>4</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a hydroxyl radical and R<sub>5</sub> is a C<sub>1</sub>-C<sub>4</sub> alkoxy radical,

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

**b) cationic direct dyes of formula (II):**



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025444	015446	025446	015448	025448	015450	025450	015452	025452	015454	025454	015456	025456	015458	025458	015460	025460	015462	025462	015464	025464	015466	025466	015468	025468	015470	025470	015472	025472	015474	025474	015476	025476	015478	025478	015480	025480	015482	025482	015484	025484	015486	025486	015488	025488	015490	025490	015492	025492	015494	025494	015496	025496	015498	025498	015500	025500	015502	025502	015504	025504	015506	025506	015508	025508	015510	025510	015512	025512	015514	025514	015516	025516	015518	025518	015520	025520	015522	025522	015524	025524	015526	025526	015528	025528	015530	025530	015532	025532	015534	025534	015536	025536	015538	025538	015540	025540	015542	025542	015544	025544	015546	025546	015548	025548	015550	025550	015552	025552	015554	025554	015556	025556	015558	025558	015560	025560	015562	025562	015564	025564	015566	025566	015568	025568	015570	025570	015572	025572	015574	025574	015576	025576	015578	025578	015580	025580	015582	025582	015584	025584	015586	025586	015588	025588	015590	025590	015592	025592	015594	025594	015596	025596	015598	025598	015600	025600	015602	025602	015604	025604	015606	025606	015608	025608	015610	025610	015612	025612	015614	025614	015616	025616	015618	025618	015620	025620	015622	025622	015624	025624	015626	025626	015628	025628	015630	025630	015632	025632	015634	025634	015636	025636	015638	025638	015640	025640	015642	025642	015644	025644	015646	025646	015648	025648	015650	025650	015652	025652	015654	025654	015656	025656	015658	025658	015660	025660	015662	025662	015664	025664	015666	025666	015668	025668	015670	025670	015672	025672	015674	025674	015676	025676	015678	025678	015680	025680	015682	025682	015684	025684	015686	025686	015688	025688	015690	025690	015692	025692	015694	025694	015696	025696	015698	025698	015700	025700	015702	025702	015704	025704	015706	025706	015708	025708	015710	025710	015712	025712	015714	025714	015716	025716	015718	025718	015720	025720	015722	025722	015724	025724	015726	025726	015728	025728	015730	025730	015732	025732	015734	025734	015736	025736	015738	025738	015740	025740	015742	025742	015744	025744	015746	025746	015748	025748	015750	025750	015752	025752	015754	025754	015756	025756	015758	025758	015760	025760	015762	025762	015764	025764	015766	025766	015768	025768	015770	025770	015772	025772	015774	025774	015776	025776	015778	025778	015780	025780	015782	025782	015784	02578
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R<sub>8</sub> and R<sub>9</sub>, which are identical or different, are chosen from a hydrogen atom chosen from bromine, chlorine, fluorine, and iodine; a C<sub>1</sub>-C<sub>4</sub> alkyl C<sub>4</sub> alkoxy radical; and a -CN radical,

B represents a group chosen from the following structures B1 to B6:



[illegible]
$$\text{E}-\text{D}_1=\text{D}_2-(\text{N})_m-\text{C}_6\text{H}_3(\text{R}_{13}, \text{R}_{14}, \text{R}_{15})-\text{R}_{13}$$
[X-].[E-]D1=D2c3ccccc3n(c1R17)R16
$$(III')$$

R<sub>13</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

R<sub>14</sub> is a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one C<sub>1</sub>-C<sub>4</sub> alkyl group,

*29*  
*Cont*

$R_{15}$  is a hydrogen or halogen atom chosen from bromine, chlorine, fluorine, and iodine,

$R_{16}$  and  $R_{17}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

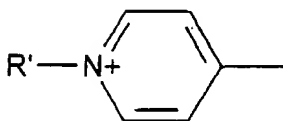
$D_1$  and  $D_2$ , which are identical or different, are a nitrogen atom or a -CH group,

$m = 0$  or  $1$ ,

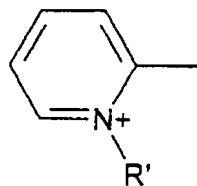
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

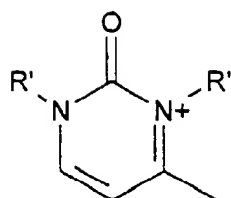
E is a group chosen from the following structures E1 to E8:



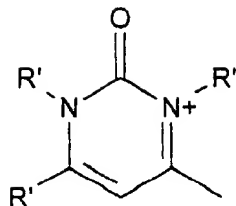
E1



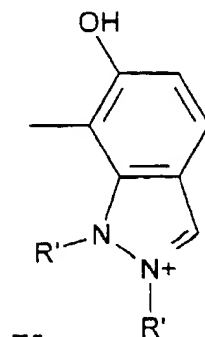
E2



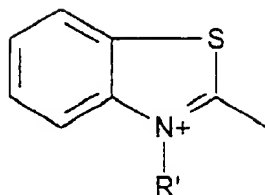
E3



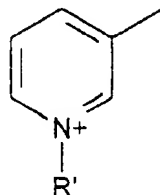
E4



E5

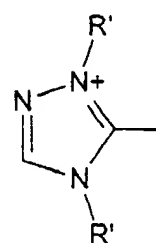


E6



E7

and



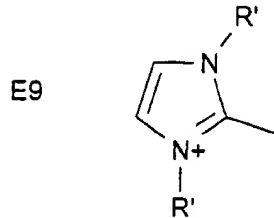
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

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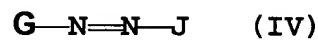
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when  $m = 0$  and  $D_1$  is a nitrogen atom, then E may also be a group having the following structure E9:



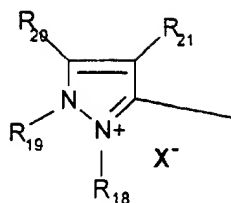
in which  $R'$  is a  $C_1$ - $C_4$  alkyl radical, and

**d) cationic direct dyes of formula (IV):**

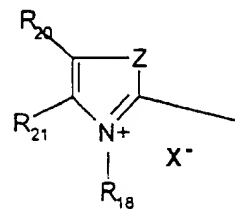


in which:

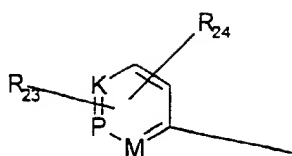
**the symbol G** is a group chosen from the following structures  $G_1$  to  $G_3$ :



G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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R<sub>19</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a phenyl radical;

R<sub>20</sub> and R<sub>21</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical and a phenyl radical, or form together in G<sub>1</sub> a benzene ring which is substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals, or form together in G<sub>2</sub> a benzene ring which is optionally substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals;

R<sub>20</sub> may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an -NR<sub>19</sub> group;

M is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub>;

K is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub>;

P is a group chosen from -CH; -CR wherein R denotes C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub> where r is zero or 1;

R<sub>22</sub> is chosen from an O<sup>-</sup> atom, a C<sub>1</sub>-C<sub>4</sub> alkoxy radical and a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

R<sub>23</sub> and R<sub>24</sub>, which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and an -NO<sub>2</sub> radical;

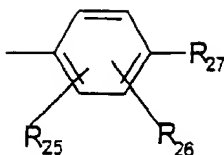
X<sup>-</sup> is an anion;

**wherein J is chosen from:**

**-(a)** a group having the following structure J<sub>1</sub>:

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J<sub>1</sub>

in which structure J<sub>1</sub>,

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

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R<sub>29</sub> and R<sub>30</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a

C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, and a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical; and

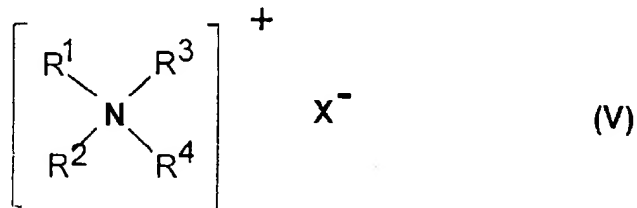
*29*  
*Cont*

**-(b)** a 5- or 6- membered nitrogen-containing heterocycle group which optionally contains additional heteroatoms, carbonyl-containing groups, or a mixture of additional heteroatoms and carbonyl-containing groups and which is unsubstituted or substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, amino and phenyl radicals, and

wherein said second composition comprises, in a medium suitable for dyeing, at least one oxidizing agent; and

wherein either said first composition or said second composition further comprises at least one quaternary ammonium salt chosen from:

(ii)<sub>1</sub> - quaternary ammonium salts of the following formula (V):

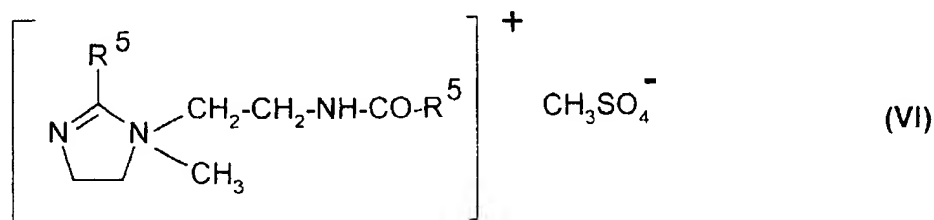


in which

the radicals R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxy-carbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl, aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is a radical comprising 8 to 30 carbon atoms;

X<sup>-</sup> is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

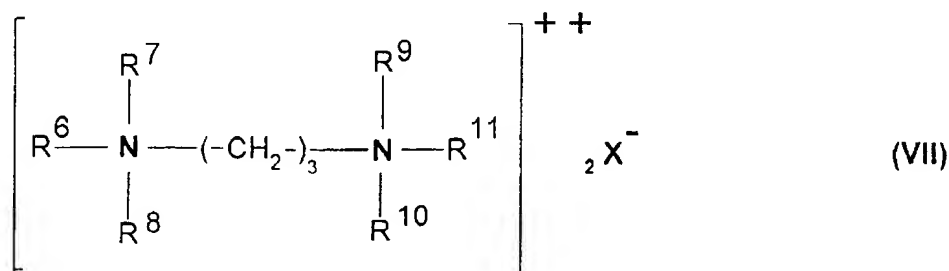
(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



in which

R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):



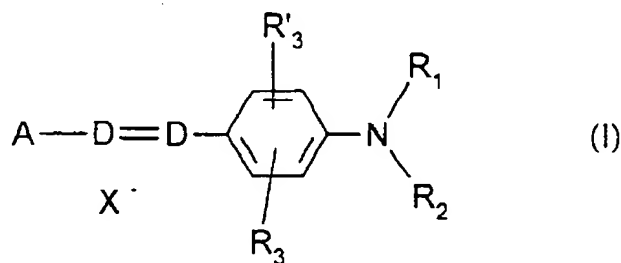
in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

74. A multicompartment dyeing kit wherein a first compartment contains a first composition and a second compartment contains a second composition,  
wherein said first composition comprises, in a medium suitable for dyeing:  
at least one cationic direct dye chosen from:

a) cationic direct dyes of formula (I):



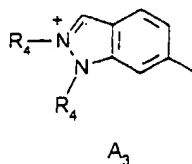
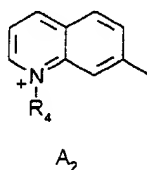
in which:

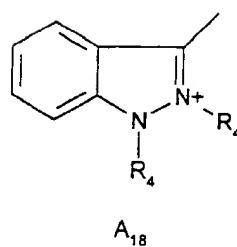
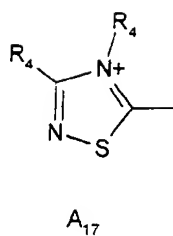
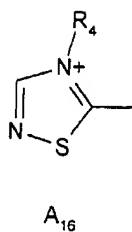
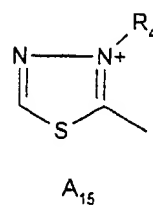
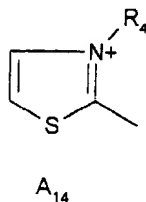
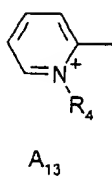
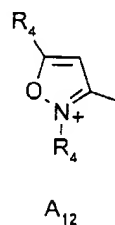
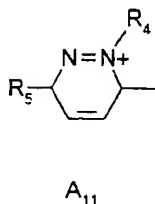
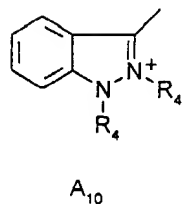
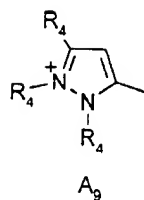
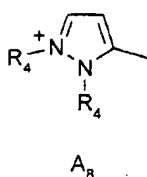
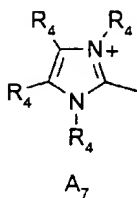
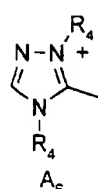
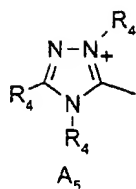
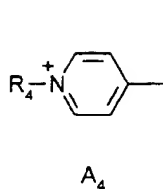
D is a nitrogen atom or a -CH group,

R<sub>1</sub> and R<sub>2</sub>, which are identical or different, are chosen from a hydrogen atom; a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a -CN, -OH or -NH<sub>2</sub> radical or form with each other or a carbon atom of the benzene ring a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with at least one C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a 4'-aminophenyl radical,

1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367
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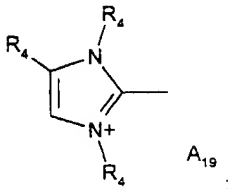
A is a group chosen from the following structures A<sub>1</sub> to A<sub>19</sub>:







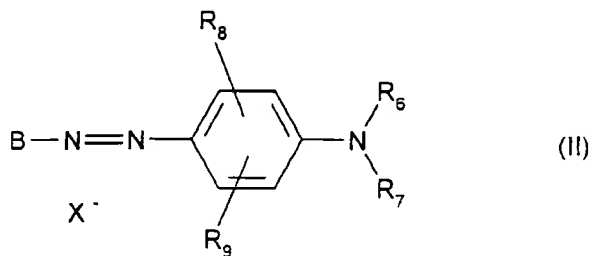
and



in which R<sub>4</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical which is unsubstituted or substituted with a hydroxyl radical and R<sub>5</sub> is a C<sub>1</sub>-C<sub>4</sub> alkoxy radical,

with the proviso that when D represents -CH, A is A<sub>4</sub> or A<sub>13</sub> and R<sub>3</sub> is different from an alkoxy radical, then R<sub>1</sub> and R<sub>2</sub> are not simultaneously hydrogen atoms;

**b) cationic direct dyes of formula (II):**



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in which:

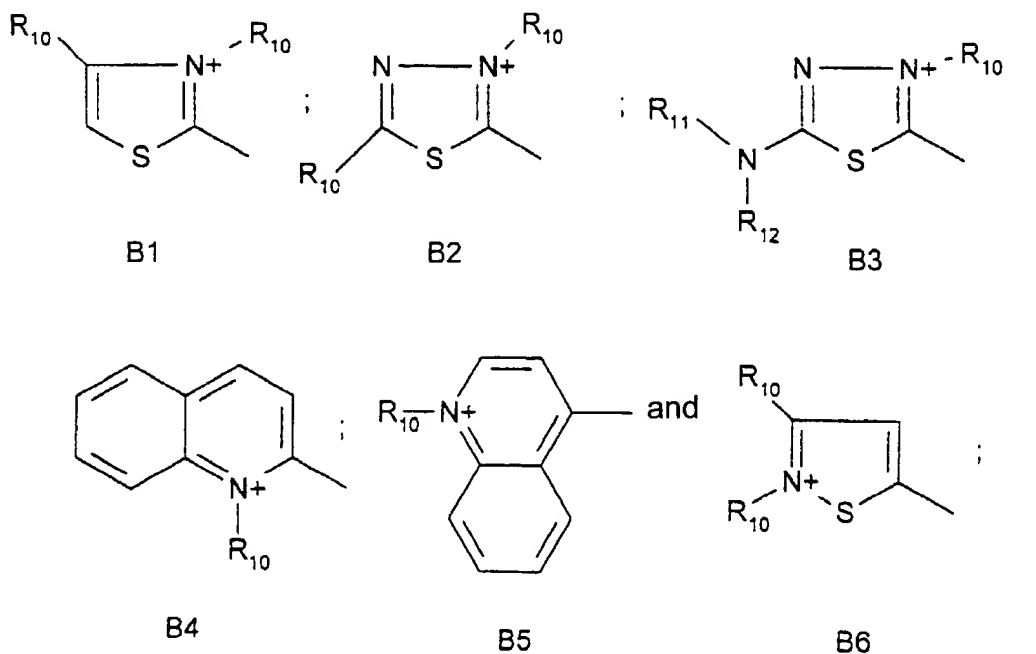
$R_6$  is a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

$R_7$  is chosen from a hydrogen atom; an alkyl radical which is unsubstituted or substituted with a -CN radical or with an amino group; and a 4'-aminophenyl radical, or forms with  $R_6$  a heterocycle optionally containing at least one of oxygen and nitrogen and which is unsubstituted or substituted with a  $C_1$ - $C_4$  alkyl radical,

$R_8$  and  $R_9$ , which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from bromine, chlorine, fluorine, and iodine; a  $C_1$ - $C_4$  alkyl radical; a  $C_1$ - $C_4$  alkoxy radical; and a -CN radical,

$X^-$  is an anion,

B represents a group chosen from the following structures B1 to B6:

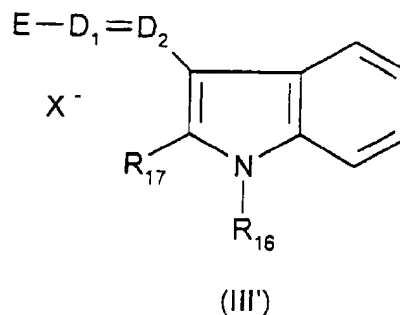
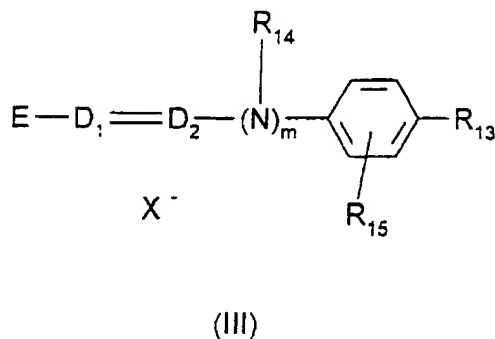


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in which  $R_{10}$  is a  $C_1$ - $C_4$  alkyl radical,  $R_{11}$  and  $R_{12}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical;

c) cationic direct dyes of the following formula (III) and formula (III'):



in which:

$R_{13}$  is chosen from a hydrogen atom, a  $C_1$ - $C_4$  alkoxy radical, a halogen atom chosen from bromine, chlorine, fluorine, and iodine; and an amino radical,

$R_{14}$  is a hydrogen atom, a  $C_1$ - $C_4$  alkyl radical or forms with a carbon atom of the benzene ring a heterocycle which is optionally oxygen-containing and is unsubstituted or substituted with at least one  $C_1$ - $C_4$  alkyl group,

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$R_{15}$  is a hydrogen or halogen atom chosen from bromine, chlorine, fluorine, and iodine,

$R_{16}$  and  $R_{17}$ , which are identical or different, are a hydrogen atom or a  $C_1$ - $C_4$  alkyl radical,

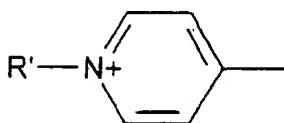
$D_1$  and  $D_2$ , which are identical or different, are a nitrogen atom or a -CH group,

$m = 0$  or  $1$ ,

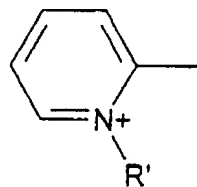
with the proviso that when  $R_{13}$  is an unsubstituted amino group, then  $D_1$  and  $D_2$  simultaneously are -CH groups and  $m = 0$ ,

$X^-$  is an anion,

E is a group chosen from the following structures E1 to E8:



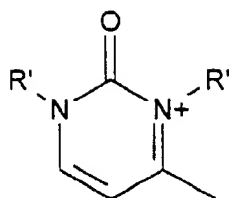
E1



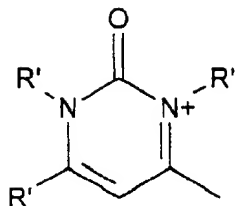
E2

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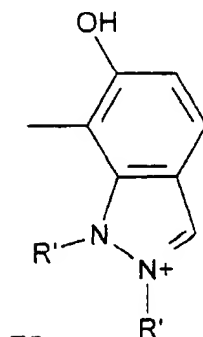
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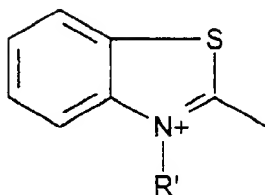
E3



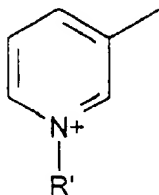
E4



E5

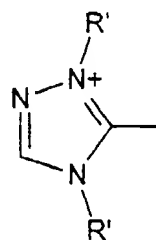


E6



E7

and



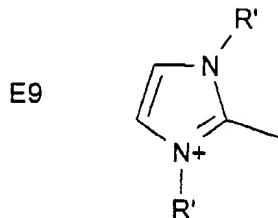
E8

in which R' is a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

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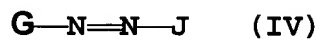
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when  $m = 0$  and  $D_1$  is a nitrogen atom, then E may also be a group having the following structure E9:



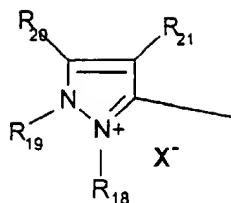
in which  $R'$  is a  $C_1$ - $C_4$  alkyl radical, and

**d) cationic direct dyes of formula (IV):**

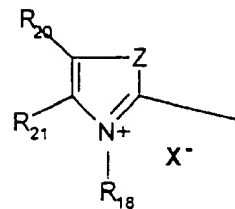


in which:

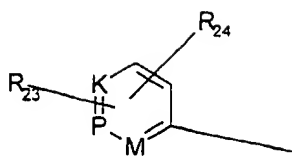
**the symbol G** is a group chosen from the following structures  $G_1$  to  $G_3$ :



G<sub>1</sub>



G<sub>2</sub>



G<sub>3</sub>

in which structures G<sub>1</sub> to G<sub>3</sub>,

R<sub>18</sub> is chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a phenyl radical which is unsubstituted or substituted with a C<sub>1</sub>-C<sub>4</sub> alkyl radical or with a halogen atom chosen from chlorine, bromine, iodine and fluorine;

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*29 Cont*  
R<sub>19</sub> is a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a phenyl radical;

R<sub>20</sub> and R<sub>21</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical and a phenyl radical, or form together in G<sub>1</sub> a benzene ring which is substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals, or form together in G<sub>2</sub> a benzene ring which is optionally substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy and NO<sub>2</sub> radicals;

R<sub>20</sub> may also be a hydrogen atom;

Z is an oxygen or sulphur atom or an -NR<sub>19</sub> group;

M is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>);

K is a group chosen from -CH; -CR wherein R is C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub>;

P is a group chosen from -CH; -CR wherein R denotes C<sub>1</sub>-C<sub>4</sub> alkyl; and -NR<sub>22</sub>(X<sup>-</sup>)<sub>r</sub> where r is zero or 1;

R<sub>22</sub> is chosen from an O<sup>-</sup> atom, a C<sub>1</sub>-C<sub>4</sub> alkoxy radical and a C<sub>1</sub>-C<sub>4</sub> alkyl radical;

R<sub>23</sub> and R<sub>24</sub>, which are identical or different, are chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and an -NO<sub>2</sub> radical;

X<sup>-</sup> is an anion;

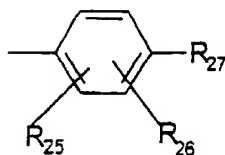
**wherein J** is chosen from:

**-(a)** a group having the following structure J<sub>1</sub>:

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J<sub>1</sub>

in which structure J<sub>1</sub>,

R<sub>25</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; a C<sub>1</sub>-C<sub>4</sub> alkoxy radical; and a radical chosen from -OH, -NO<sub>2</sub>, -NHR<sub>28</sub>, -NR<sub>29</sub>R<sub>30</sub>, and -NHCO(C<sub>1</sub>-C<sub>4</sub>alkyl), or forms with R<sub>26</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen and sulphur;

R<sub>26</sub> is chosen from a hydrogen atom; a halogen atom chosen from chlorine, bromine, iodine and fluorine; a C<sub>1</sub>-C<sub>4</sub> alkyl radical; and a C<sub>1</sub>-C<sub>4</sub> alkoxy radical, or forms with R<sub>27</sub> or R<sub>28</sub> a 5- or 6-membered ring optionally containing at least one heteroatom chosen from nitrogen, oxygen or sulphur;

R<sub>27</sub> is chosen from a hydrogen atom, an -OH radical, an -NHR<sub>28</sub> radical, and an -NR<sub>29</sub>R<sub>30</sub> radical;

R<sub>28</sub> is chosen from a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical, and a phenyl radical;

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R<sub>29</sub> and R<sub>30</sub>, which are identical or different, are chosen from a C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl radical, and a C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl radical; and

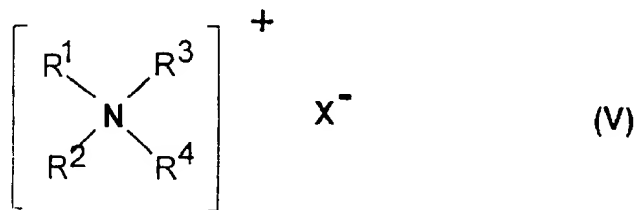
*29*  
*Cont*

-(b) a 5- or 6- membered nitrogen-containing heterocycle group which optionally contains additional heteroatoms, carbonyl-containing groups, or a mixture of additional heteroatoms and carbonyl-containing groups and which is unsubstituted or substituted with at least one radical chosen from C<sub>1</sub>-C<sub>4</sub> alkyl, amino and phenyl radicals, and

wherein said second composition comprises, in a medium suitable for dyeing, at least one oxidizing agent; and

wherein either said first composition or said second composition further comprises at least one quaternary ammonium salt chosen from:

(ii)<sub>1</sub> - quaternary ammonium salts of the following formula (V):



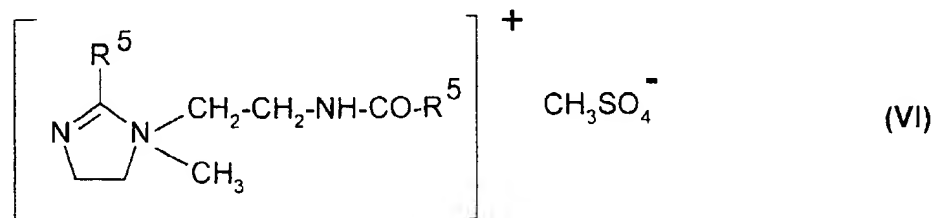
in which

29  
Cont

the radicals R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup>, which are identical or different, are chosen from a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising 1 to 30 carbon atoms; and a radical chosen from alkoxy, alkoxycarbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl, aromatic, aryl and alkylaryl radicals comprising 12 to 30 carbon atoms, wherein at least one radical among R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> is a radical comprising 8 to 30 carbon atoms;

X<sup>-</sup> is an anion chosen from halides, phosphates, acetates, lactates and alkyl sulphates;

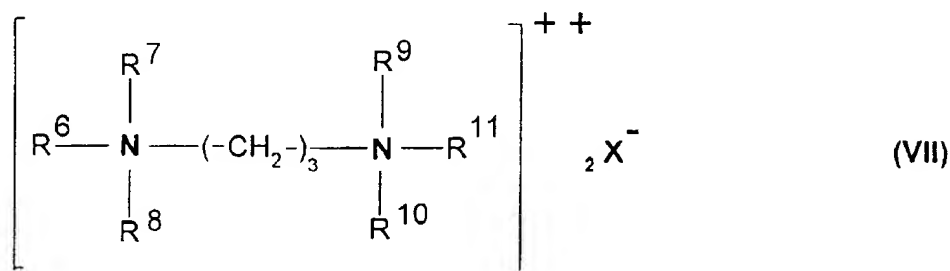
(ii)<sub>2</sub> - imidazolium salts of the following formula (VI):



in which

R<sup>5</sup> is chosen from alkenyl radicals and alkyl radicals, said alkenyl radicals and alkyl radicals comprising 13 to 31 carbon atoms and being derived from tallow fatty acids;

(ii)<sub>3</sub> - quaternary diammonium salts of the following formula (VII):

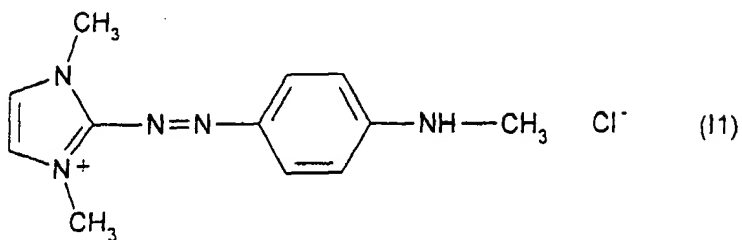


in which

R<sup>6</sup> is an aliphatic radical comprising 16 to 30 carbon atoms,

R<sup>7</sup>, R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are chosen from hydrogen or an alkyl radical comprising 1 to 4 carbon atoms, and X<sup>-</sup> is an anion chosen from halides, acetates, phosphates and sulphates.

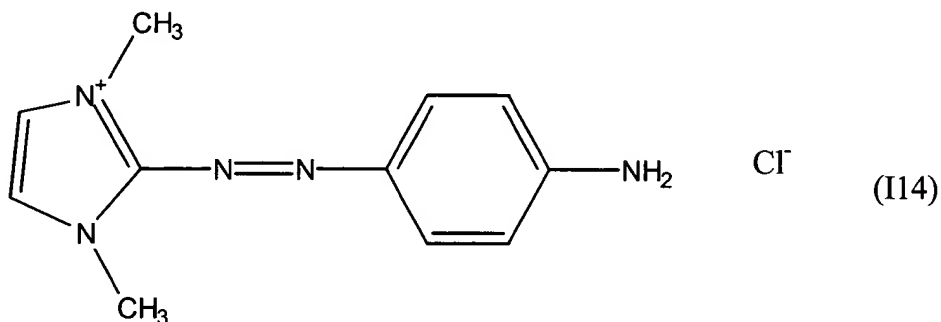
75. A composition for dyeing keratinous fibers, comprising a cationic direct dye  
of structure (I1):



and oleocetyldimethylhydroxyethylammonium chloride.

76. A composition for dyeing keratinous fibers, comprising:

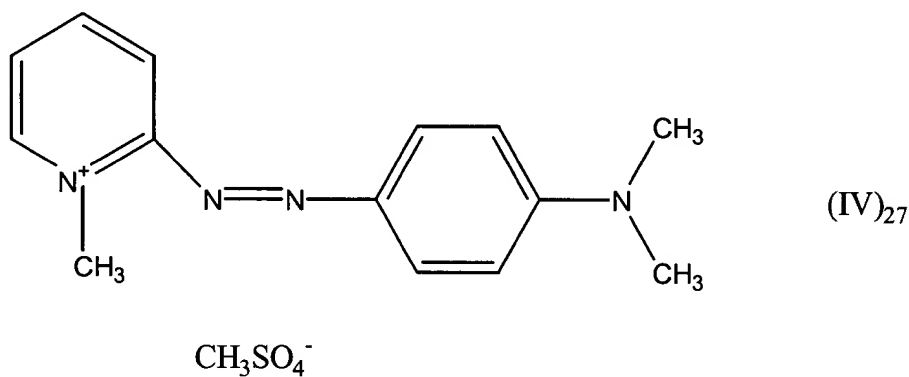
a cationic direct dye of structure (I14):



and behenyltrimethylammonium chloride.

77. A composition for dyeing keratinous fibers, comprising:

a cationic direct dye of structure (IV)<sub>27</sub>:



and cetyltrimethylammonium chloride.--